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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/836,973

04/18/2001

Harry Q. Fon

INTL-0452-US (P9563)

9071

7590

02/12/2004

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EXAMINER

A, MINH D

ART UNIT

PAPER NUMBER

2821

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/836,973

Applicant(s)

PON, HARRY Q.

Examiner

Minh D A

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 October 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-21, 24 and 26-30 is/are pending in the application.
- 4a) Of the above claim(s) 1-12, 22, 23 and 25 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-21 is/are allowed.
- 6) ☒ Claim(s) 24 and 26-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other:

**DETAILED ACTION**

1. Applicant's election with traverse of claims 13-21 and 24 and 26-30 are acknowledged.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 24, 26-29 are rejected under 35 U.S.C. 102(b) as being unpatentable by Farb et al (US 5,686,330).

Regarding claim 24, Farb discloses a method of making a self aligned static induction transistor comprising: a semiconductor substrate (11); an active circuit element(10) formed in the substrate (11); a guard ring (15) encircling the active circuit element formed in the substrate (11); and a trench (21) filled with a conductive material coupled to the guard ring (15). See figures 1-11, col.3, lines 50-67 to col.7, lines 1-18.

Regarding claim 26, Farb discloses a one metal layer (12) over the substrate (11), the material electrically coupled to the guard ring (15) and the metal one layer (12). See figures 1-6.

Regarding claims 27-29, Farb discloses the guard ring (15) completely surrounds the active circuit element or trench (30) completely surrounds the active circuit element

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or an active circuit element includes a transistor. See figures 1-11, col.3, lines 50-67 to col.7, lines 1-18.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over by Farb et al (US 5,686,330).

Regarding claim30, Farb discloses the claimed invention except for the active circuit element is enclosed in a shield over the substrate. It would have been an obvious matter of design choice to have the active element is enclosed in a shield over the substrate, since applicant has not disclosed that the active circuit element is enclosed in a shield over the substrate solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the active circuit element is enclosed in a shield over the substrate.

***Allowable Subject Matter***

6. Claims 13-21 are allowed.

The following is an examiner's statement of reasons for allowance:

The prior art does not teach or fairly suggest that, a passive circuit element

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between the substrate and the interconnection layer and a trench that encircles the passive circuit element, the trench filled with a conductive material in combination with all limitations recited in independent claim 13.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wong. (US 6,455,915); Kubota et al. (US 6,445,026); Quek et al. (US 6,252,290); Yuan. (US 6,407,441) are cited to show the integrated circuit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Minh A whose telephone number is (703) 605-4247. The examiner can normally be reached on M-F (7:30 –4:30 PM).

If attempts to reach the examiner by telephone is unsuccessful, the examiner's supervisor, Don Wong, can be reached on (703) 308-4856. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and (703) 872-9319 for final communications.

Any inquiry of a general nature or relating to the status of this application should be directed to the Technology Center receptionist whose telephone number is (703) 308-0956.

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Examiner

Minh A

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1/5/04

Haissa Philogene  
Primary Examiner  
A.U. 2821

*Haissa Philogene*